

Recovery Plan Action Status

Plan Name: Recovery Plan for Blackburn's Sphinx Moth

Plan Status: Final

Plan Date: 28-Sep-05

Lead Agency: USFWS

Lead Office: Pacific Islands Fish And Wildlife Office
(808)
792-9400)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Blackburn's sphinx moth (Manduca blackburni)	1	1.1	Identify and map significant, wild Nothoecstrum spp. host plant populations	Partially Complete	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division, Hawaii Biodiversity and Mapping Program	Research: Habitat Status	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Some mapping of areas have been completed, but all areas have not been delineated, ground-truthed or mapped.
Blackburn's sphinx moth (Manduca blackburni)	1	1.2	Finalize delineation of recovery and management units	Complete	FY 2000 - FY 2004	FY 2005	U.S. Fish and Wildlife Service, Ecological Services Division	Management: Planning	Internal Field Assistance, Species Expert	All recovery and management units have been identified.
Blackburn's sphinx moth (Manduca blackburni)	1	1.3	Ensure long-term protection of habitat	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources	Management: Habitat Maintenance and Manipulation, Management: Planning, Management: Predator and Competitor Control, Research: Habitat Status, Research: Management Techniques, Research: Population Surveys	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	1	1.4	Identify and control threats to Blackburn's sphinx moth and their host plants	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Management: Predator and Competitor Control, Research: Competition, Research: Disease, Research: Environmental Contaminants, Research: Predation	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	

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Blackburn's sphinx moth (Manduca blackburni)	1	1.4.1	Construct and maintain fencing around those areas containing Nothocestrum spp. host plants within the Blackburn's sphinx moth management units; remove ungulates	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources	Work type not yet selected	Contract	
Blackburn's sphinx moth (Manduca blackburni)	1	1.4.2	Conduct alien weed control	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources	Management: Habitat Maintenance and Manipulation	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	1	1.4.3	Provide necessary wildfire protection	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources	Management: Habitat Maintenance and Manipulation	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	1	1.4.4	Propagate and maintain Nothocestrum spp. host plant genetic stock ex situ	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Management: Habitat Maintenance and Manipulation	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	1	1.4.5	Protect management units from human disturbance	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources	Other: Information and Education	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	

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Blackburn's sphinx moth (Manduca blackburni)	1	1.4.6	Control and manage purposeful and accidental introduction of potential predators and parasites	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Agriculture, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources	Management: Predator and Competitor Control	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	1	1.4.7	Control other threats as appropriate	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division	Management: Disease Control, Management: Other, Management: Predator and Competitor Control, Research: Competition, Research: Disease, Research: Environmental Contaminants, Research: Predation	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	1	2.1	Select populations for expansion or sites for new populations	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Management: Reintroduction	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	1	2.2	Prepare sites within management units and out-plant species of Nothocestrum known to be larval host plants	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources	Management: Habitat Maintenance and Manipulation	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	2	3.1	Conduct research to confirm or discount Nothocestrum longifolium and Nothocestrum peltatum as suitable larval host plants	Planned	FY 2012		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Geological Survey, Biological Resources Division	Research: Habitat Requirements	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Initial discussions on research proposals have begun and are in progress.

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Blackburn's sphinx moth (<i>Manduca blackburni</i>)	2	3.2	Determine adult Blackburn's sphinx moth host plant associations and potential limiting factors	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Geological Survey, Biological Resources Division	Research: Habitat Requirements	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (<i>Manduca blackburni</i>)	2	3.3	Study the natural recruitment and fecundity of larval host plants (<i>Nothocestrum</i> spp.)	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Geological Survey, Biological Resources Division	Research: Habitat Requirements	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (<i>Manduca blackburni</i>)	2	3.4	Determine annual Blackburn's sphinx moth life history cycle; investigate impacts of non-native predators and parasites	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Geological Survey, Biological Resources Division	Management: Predator and Competitor Control, Research: Competition, Research: Demographic Studies, Research: Migration, Research: Predation	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (<i>Manduca blackburni</i>)	2	3.5	Conduct studies on the demography, dispersal and genetics of Blackburn's sphinx moth	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Geological Survey, Biological Resources Division	Research: Demographic Studies, Research: Genetics, Research: Migration	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (<i>Manduca blackburni</i>)	2	3.6	Evaluate research results and implement adaptive management as necessary	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Management, Management: Habitat Maintenance and Manipulation	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	

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Blackburn's sphinx moth (Manduca blackburni)	1	4	Develop and implement a detailed monitoring plan for Blackburn's sphinx moth	Partially Complete	FY 2010		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Geological Survey, Biological Resources Division	Research: Population Surveys	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	2	5.1	Investigate feasibility and desirability of Blackburn's sphinx moth translocation	Planned	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Geological Survey, Biological Resources Division	Management: Reintroduction, Research: Reintroduction	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	2	5.2	Develop and implement specific plans for Blackburn's sphinx moth translocation	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Geological Survey, Biological Resources Division	Research: Reintroduction	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	2	5.3	If necessary for translocation, develop methods for laboratory-rearing of Blackburn's sphinx moth	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, U.S. Geological Survey, Biological Resources Division	Research: Propagation	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	3	6	Develop and initiate a public information program for Blackburn's sphinx moth	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division	Other: Information and Education	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Blackburn's sphinx moth (Manduca blackburni)	3	7.1	Refine/revise downlisting and delisting criteria as necessary	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division	Management	Internal Field Assistance, Internal Technical Assistance, Species Expert	